

## ABSTRACT OF THE DISCLOSURE

In order to estimate power consumption, over a given time interval, of digital circuits described at the level of functional elements provided with input/output terminals associated additional elements are emulated at the hardware level. The said additional emulated elements are able to detect, during said time interval, at least one signal indicative of the behavior of the functional element associated during hardware emulation of the circuit. Preferably the number of transitions performed during the aforesaid time interval of the associated functional element is recorded, as well as the fraction of time in which the state of said functional element is stable. The value of said signals is acquired to perform an estimation of the power consumption of the functional element during the aforesaid time interval.

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